

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 153756-2 DK	FOR FURTHER ACTION <small>see Form PCT/ISA/220 as well as, where applicable, item 5 below.</small>	
International application No. PCT/IL04/00951	International filing date (day/month/year) 17 October 2004 (17.10.2004)	(Earliest) Priority Date (day/month/year) 17 October 2003 (17.10.2003)
Applicant EXPLAY LTD.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the Report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☒ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box No. II)

3. ☐ Unity of invention is lacking (See Box No. III)

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 3

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☒ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (January 2004)

BEST AVAILABLE COPY

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL04/00951

Box IV TEXT OF THE ABSTRACT (Continuation of Item 5 of the first sheet)

NEW ABSTRACT

An optical system and method are presented to produce a desired illuminating light pattern. The system comprises a light source (202) system configured and operable to produce structured light in the form of a plurality of spatially separated light beams; and a beam shaping arrangement (210). The beam shaping arrangement is configured to as a diffractive optical unit configured and operable to carry out at least one of the following: (i) combining an array of the spatially separated light beams into a single light beam thereby significantly increasing intensity of the illuminating light; (ii) affecting intensity profile of the light beam to provide the illuminating light of a substantially rectangular uniform intensity profile.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL04/00951

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G02B 27/10; H01S 03/10

US CL : 359/619; 372/21

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
U.S. : 359/618, 619, 620, 625, 626, 563, 566, 569; 371/21, 43.01, 50.12

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,563,567 A (KOMATSUDA et al) 13 May 2003 (13.05.2003)	65
X	US 2002/0191913 A1 (HOCKER et al.) 19 December 2002 (19.12.2002).	77
A	US 4,995,693 A (WILSON) 26 February 1991 (26.02.1991).	29-32, 77-78
A	US 5,682,265 A (FARN et al) 28 October 1997 (28.10.1997).	1-90
A	US 6,542,531 A (SIRBU et al) 01 April 2003 (01.04.2003).	1-90
A	US 5,195,103 A (HINTON et al) 16 March 1993 (16.03.1993).	1-90
A	Turunen, J., "Optimisation and Fabrication of Grating Beamsplitters", J. Phys. D: Appl. Phys. 21 (1988), S(102)-S(105).	1-90
A	LOHMANN, A. W., "Array Illuminators and Complexity Theory", OPTICS COMMUNICATIONS 89 (1992), 167-172.	1-90

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"Z" document member of the same patent family

Date of the actual completion of the international search

07 August 2005 (07.08.2005)

Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Facsimile No. (703) 305-3230

Date of mailing of the international search report

14 OCT 2005

Authorized officer

Ricky L. Mack

Telephone No. (571) 272-1562

Form PCT/ISA/210 (second sheet) (January 2004)

BEST AVAILABLE COPY

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IL04/00951

Continuation of B. FIELDS SEARCHED Item 3:

USPAT, USPGPub, EPO, JPO, Derwent:

search terms: spatial\$2 adj2 separat\$3, array, dammann, tophat, beamshap\$3 or (beam near2 shap\$3) or beam-shap\$3, (light or illuminat\$3 or intensity) near3 profile

Form PCT/ISA/210 (extra sheet) (January 2004)

BEST AVAILABLE COPY